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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 08/694.542      | 08/09/96    | WHITEHOUSE           | C 840.052           |

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EXAMINER

ANDERSON. B

ART UNIT

PAPER NUMBER

2506

DATE MAILED: 09/09/97

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/694,542**

Applicant(s)  
**WHITEHOUSE ET. AL.**

Examiner  
**First Last**

Group Art Unit  
**1234**



☐ Responsive to communication(s) filed on \_\_\_\_\_.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-32 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-32 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 529,885 or Douglas (736) in view of Bier (425), Vestal (533), and Michael "an ion trap storage/time-of-flight mass spectrometer".

EP patent 529,885 and Douglas disclose an apparatus for analyzing chemical species comprising: at least two vacuum stages; at least one multiple ion guide (Douglas col.2, line 60 and EP Fig. 1) having plurality of plural poles; electrode elements located at the entrance and exit of

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said at least one guide; a time of flight spectrometer (TOF) located in said one of said vacuum stages; and means to apply voltages to said guide to trap and induce collisions in such to produce daughter fragments which may be then analyzed (see page 8, lines 52-54 of EP patent). Note EP patent discloses on page 9, lines 23-24 of the specification that said ion guide may have quadruple or octopole or hexapole set of rods. In both the EP and Douglas patents the TOF axis is parallel to the ion guide axis. However, Bier alternatively discloses in claim 1 that a trapping mass spectrometer having a quadruple field present (which could be used as a guide), may direct trapped ions in a orthogonal direction to said trapping chamber, to detect such.

The ion sources of both the primary references is substantially at atmospheric pressure and may be sources such as electrospray (page 2, line 3 of EP or col. 4, lines 12-13 of Douglas). The EP reference also discloses that the at least one ion guide may serve as an ion trap and to filter out unwanted ions page 6, second paragraph of the specification.

The secondary reference to Vestal discloses a similar arrangement but uses a series of ion guides (118,122) , prior to the mass analysis by quadruple (124) (Figure 5). Note fragmentation occurs in the second guide 122, prior to final analysis. Michael further discloses that if ions are trapped in a first guide by a quadruple means, then the ions released may be detected by a reflectron in series with such.

Therefore, it would appear applicants are claiming a combination of well known elements such as one or multiple ion guides, within plural chambers and having the fragmented ions

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detected by a variety of different TOF analyzers, i.e. reflectron(s), ion traps, or detectors perpendicular to such.

*Specification*

3. The abstract of the disclosure is objected to because the abstrate is too long. Correction is required. See MPEP § 608.01(b).

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jolliffe, Franzen (035), Schwartz, Bier (987), Mylchreest, and Henion have been cited to show other similar devices .

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ex. Anderson whose telephone number is (703) 308-4851.

BCA

July 25, 1997

BRUCE ANDERSON  
PRIMARY EXAMINER  
GROUP 2500

*Bruce C.*  
*Anderson*